

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
10 June 2004 (10.06.2004)

PCT

(10) International Publication Number  
**WO 2004/048511 A3**

(51) International Patent Classification<sup>7</sup>: **G01N 33/48**

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(21) International Application Number:  
PCT/IL2003/000998

(22) International Filing Date:  
26 November 2003 (26.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

|            |                               |    |
|------------|-------------------------------|----|
| 10/308,778 | 26 November 2002 (26.11.2002) | US |
| 10/310,188 | 5 December 2002 (05.12.2002)  | US |
| 60/441,241 | 17 January 2003 (17.01.2003)  | US |
| 60/411,230 | 17 January 2003 (17.01.2003)  | US |
| 60/457,788 | 27 March 2003 (27.03.2003)    | US |
| 10/604,945 | 27 August 2003 (27.08.2003)   | US |
| 10/604,942 | 27 August 2003 (27.08.2003)   | US |
| 10/604,943 | 28 August 2003 (28.08.2003)   | US |
| 10/604,944 | 28 August 2003 (28.08.2003)   | US |
| 10/604,984 | 29 August 2003 (29.08.2003)   | US |
| 10/605,838 | 30 October 2003 (30.10.2003)  | US |
| 10/605,840 | 30 October 2003 (30.10.2003)  | US |

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- with sequence listing part of description published separately in electronic form and available upon request from the International Bureau

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(88) Date of publication of the international search report:  
15 December 2005

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: BIOINFORMATICALLY DETECTABLE GROUP OF NOVEL VIRAL REGULATORY GENES AND USES THEREOF

(57) Abstract: The present invention relates to a first group of novel genes, here identified as genomic address messenger or VGAM genes, and a second group of novel operon-like genes, here identified as viral genomic record or VGR genes. VGAM genes selectively inhibit translation of known 'target' genes, many of which are known to be involved in various diseases. Nucleic acid molecules are provided respectively encoding 1560 VGAM genes, and 205 VGR genes, as are vectors and probes both comprising the nucleic acid molecules, and methods and systems for detecting VGAM and VGR genes and specific functions and utilities thereof, for detecting expression of VGAM and VGR genes, and for selectively enhancing and selectively inhibiting translation of the respective target genes thereof.



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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL03/00998

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01N 33/48

US CL : 702/19

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 702/19

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
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## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|------------|--|-----------------------|
| X          | JACQUE et al. Modulation of HIV-1 replication by RNA interference. Nature. 25 July 2002, Vol. 418, pages 435/438, see entire document.                                 | 1-20                  |
| A          | GITLIN et al. Short interfering RNA confers intracellular antiviral immunity in human cells. Nature. 25 July 2002, Vol. 418, pages 430-435.                            | 1-20                  |
| A          | XU et al. The Drosophila MicroRNA Mir-14 Suppresses Cell Death and Is Required for Normal Fat Metabolism. Current Biology. 29 April 2003, Vol. 13, pages 790-795.      | 1-20                  |
| A          | OMOTO et al. HIV-1 ner suppression by virally encoded microRNA. Retrovirology. December 2004, Vol. 1, pages 44-55.   | 1-20                  |
| A          | LU et al. Adenovirus VAI Noncoding RNA Can Inhibit Small Interfering RNA and MicroRNA Biogenesis. Journal Virology. December 2004, Vol. 78, No. 23, pages 12868-12876. | 1-20                  |
| A          | AMBROS, V. microRNAs: Tiny Regulators with Great Potential. Cell. 28 December 2001, Vol. 107, pages 823-826.   | 1-20                  |
| A          | LIM et al. Microarray analysis shows that some microRNAs downregulate large numbers of target mRNAs. Nature February 2005, Vol. 433, pages 769-773.                    | 1-20                  |

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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|---|--|
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Date of the actual completion of the international search

18 October 2005 (18.10.2005)

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
Commissioner of Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Date of mailing of the international search report

04 NOV 2005

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571-272-1600

# INTERNATIONAL SEARCH REPORT

PCT/IL03/00998

## Continuation of B. FIELDS SEARCHED Item 3:

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